

What is claimed is:

1. A reshaped human monoclonal antibody and functional fragments thereof, specifically reactive with an F protein epitope of Respiratory Syncytial Virus and capable of neutralizing infection by said virus selected from the group consisting of Hu19A, Hu19B, Hu19C and Hu19D.

2. The monoclonal antibody or functional fragment thereof according to Claim 1 which comprises a light chain amino acid sequence of Figure 3 selected from Sequences 19A, 19B, 19C and 19D and/or a heavy chain amino acid sequence of Figure 2 selected from Sequences 19A, 19B, 19C and 19D.

3. The monoclonal antibody according to Claim 1 wherein said fragment is selected from the group consisting of Fv, Fab and F(ab')₂.

4. An isolated nucleic acid molecule selected from the group consisting of:

(a) a nucleic acid sequence encoding any of the human monoclonal antibodies and functional fragments thereof of claim 1;

(b) a nucleic acid complementary to any of the sequences in (a); and

(c) a nucleic acid sequence of 18 or more nucleotides capable of hybridizing to (a) or (b) under stringent conditions.

5. A isolated nucleic acid molecule encoding a monoclonal antibody or functional fragment thereof according to Claim 1 having a nucleotide sequence of Figure 4.

6. A recombinant plasmid comprising a nucleic acid sequence of Claim 4.

7. A recombinant plasmid comprising a nucleic acid sequence of claim 5.

8. A plasmid according to Claim 7 encoding a protein sequence of Figure 2 or 3.

9. A host cell comprising the plasmid of Claim 8.

10. A process for the production of a human antibody specific for RSV comprising culturing the host cell of Claim 9 in a medium under suitable conditions of time, temperature and pH and recovering the antibody so produced.

11. A method of detecting RSV comprising contacting a source suspected of containing RSV with a diagnostically effective amount of the monoclonal antibody of Claim 1 and determining whether the monoclonal antibody binds to the source.

12. A method for providing passive immunotherapy to RSV disease in a human, comprising administering to the human an immunotherapeutically effective amount of the monoclonal antibody of Claim 1.

13. The method according to Claim 12 wherein the passive immunotherapy is provided prophylactically.

14. A pharmaceutical composition comprising at least one dose of an immunotherapeutically effective amount of the monoclonal antibody of Claim 1 in a pharmaceutically acceptable carrier.

15. A pharmaceutical composition comprising at least one dose of an immunotherapeutically effective amount of the monoclonal antibody of Claim 1 in combination with at least one additional monoclonal antibody.

16. The pharmaceutical composition according to Claim 15 wherein said additional monoclonal antibody is an anti-RSV antibody distinguished from the antibody of Claim 1 by virtue of being reactive with a different epitope of the RSV F protein antigen.